

## WEST Search History

DATE: Thursday, September 11, 2003

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR</i>			
L4	L3 and ((424/450)!.CCLS. )	245	L4
L3	(peg) same liposome\$	923	L3
L2	L1 and ((424/450)!.CCLS. )	84	L2
L1	(hydrophilic adj1 polymer\$) same liposome\$	344	L1

END OF SEARCH HISTORY

**WEST**

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L2: Entry 83 of 84

File: USPT

Aug 29, 1989

DOCUMENT-IDENTIFIER: US 4861597 A

TITLE: Novel functionallized liposomes and a process for production thereof

Detailed Description Text (2):

In this invention, an amphiphilic compound having a molecular weight of about 5,000 to about 30,000 is used as one of matrix material for liposomes. As such an amphiphilic compound, there are preferably exemplified, for example, lipopolysaccharides (hereinafter referred to as LPS), lipopolysaccharide-like compounds, natural polypeptides having a hydrophobic group by nature, natural polypeptides having a hydrophobic group introduced thereinto, hydrophilic synthetic polypeptides having a hydrophobic group, and hydrophilic polymers whose ends have been made hydrophobic.

Detailed Description Text (5):

In this invention, liposomes having a very high encapsulation efficiency can be obtained particularly when LPS or a LPS-like compound is used as the amphiphilic compound. Between them LPS is particularly preferred. Particularly when there is used LPS, LPS-like compound, a natural polypeptide having a hydrophobic group by nature, a natural polypeptide having a hydrophobic group introduced thereinto, a hydrophilic synthetic polypeptide having a hydrophobic group, or a hydrophilic polymer whose ends have been made hydrophobic, immunological substances or physiologically active substances can be immobilized on the resulting liposomes efficiently with a sufficient binding rate without injuring the liposome. Among them, LPS is particularly preferred.

Current US Original Classification (1):

424/450

## CLAIMS:

1. A functionalized liposome comprising at least one phospholipid and an amphiphilic compound selected from the group consisting of natural and synthetic lipopoly saccharides, natural and synthetic polypeptides having hydrophobic substituents and synthetic hydrophilic polymers whose ends have been made hydrophobic, and having a molecular weight of about 5,000 to about 30,000.

10. A functionallized liposome according to claim 9, wherein the amphiphilic compound is at least one member selected from the group consisting of natural and synthetic lipopolysaccharides, natural and synthetic polypeptides having a hydrophobic group and synthetic hydrophilic polymers whose ends have been made hydrophobic.

13. A process for producing functionallized liposomes, characterized by forming functionallized liposomes in the presence of an amphiphilic compound selected from the group consisting of natural and synthetic lipopoly saccharides, natural and synthetic polypeptides having hydrophobic substituents and synthetic hydrophilic polymers whose ends have been made hydrophobic, and having a molecular weight of about 5,000 to about 30,000.